MARYLAND'S NONPOINT SOURCE PROGRAM
FFY 2005 Section 319(h) Incremental Proposal

Incremental Project 1

Project Title: **Corsica River Watershed Restoration Project**
Agriculture Demonstration Project
- § Capacity Development
- § Cover Crops
- § BMP Assistance and Horse Pasture Management

Proposed Budget:

Federal §319:	**$212,998**
Non-Federal Match:	$141,999
Total:	$354,997

Project Funding Period: October 01, 2005 to September 30, 2006

Expected Duration: October 11, 2005 to September 30 2008

Project Area: Corsica River Watershed
Priority Category 1, 02130507
WRAS Developed
TMDL Approved – Nitrogen & Phosphorus
303(d) List: Bacteria (1996), Biological (2004 draft, 2002), Sediments (1996), Toxics (2002)

Sponsoring Agency: Queen Anne's SCD Office
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Federal Tax ID Number: 52-6002033

Date Submitted: June 30, 2005

PROPOSAL SUMMARY

The Queen Anne's Soil Conservation District along with the Maryland Department of Agriculture proposes to further agricultural conservation efforts in the Corsica Watershed. The justification for targeting in this area was highlighted in the Corsica River WRAS, the Corsica River's TMDL, and significantly, because of the states desire to focus resources in the Corsica Watershed (see attached Corsica Business Plan) in order to achieve water quality criteria.

Presently this region needs capacity assistance in order to facilitate and accelerate the implementation of best management practices, enhance the participation in Maryland's cover crop program and support to other demonstration BMP's with particular focus on farmette horse pasture management demonstrations. Presently, funding is limited and will not meet the goals of the nutrient reduction needed to meet the TMDL.

This proposal, the Corscia River Watershed Agricultural Demonstration Project, is a comprehensive treatment of agricultural non-point source pollution, the primary source of water quality impairment in this watershed. Agricultural landowners will be targeted for increased technical assistance in the design and installation of best management practices (BMP) that emphasize sediment control and animal waste management. Strong emphasis will be placed on the riparian forest buffers enhancement. Ongoing program assistance for farmettes, such as cost-share assistance for BMP implementation, information outreach promoting horse pasture management, and increased outreach activities for cover crop participation will provide the framework to accomplish this comprehensive agricultural NPS treatment.

This project addresses the goals outlined by the FY2004 grant guidance that call for the restoration of those watersheds based on a watershed plan (see the Corsica Watershed Plan and supporting documents at http://dnr.maryland.gov/watersheds/WRAS), and having a direct relationship to a TMDL (http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/index.asp#back). Additionally, practices proposed here are consistent with CZM Section 6217 management measures and the states comprehensive management approach to non-point source pollution.

Capacity Building

The capacity to support the Corscia River Agricultural Demonstration Project goals is key to the project's success. A key objective thus funds a soil conservation/engineering technician to accelerate and coordinate the application of agricultural BMP's. It is through this additional technical capacity and watershed coordination that water quality improvement, in both surface and ground water, will lead to achieving the nutrient TMDL.

Cover Crop Program

The Corsica River Cover Crop Program will contain requirements already familiar to local agricultural producers including: provisions for sign up periods, requirements for nutrient management plans, a restriction on commercial fertilizer application until after March 1st, and guidelines that establish crop species and planting dates. Spot-checks will be carried out by the local SCD staff. Because planting dates continue to be an issue, this project will provide the producers with a management option to institute cover crops in their cropping rotation. The Corsica River Cover Crop program will be run by the local Soil Conservation District with

administrative assistance provided by the Maryland Department of Agriculture through the Maryland Agricultural Cost Share Program (MACS) and will be subject to all of its regulations and procedures.

This proposal will provide a management option not available through the State's cover crop program. Through the services of a dedicated small grain applicator a more comprehensive management program for cover crops will provide for maximum watershed coverage and water quality benefits. The availability of a custom applicator will relieve the farm operator of the additional burden of planting cover crops after harvest.

Discussions and workgroup meeting have already been held with the agricultural agencies in this region to develop a custom cover crop application program for the fall of 2005. The Soil Conservation District has committed to focusing their resources to implement an effective strategy to establish this small grain program in the Corscia watershed. In the winter of 2005, the Maryland Department of Agriculture held listening sessions with farmers to identify cover crop program weaknesses and strengths. The results of these sessions will help refine and make more effective the cover crop program enabling it to meet the needs of both the farmers and the environment.

The Corsica River Cover Crop program will administratively follow the Maryland Agricultural Cost Share Program (MACS) cover crop program offered on the Eastern Shore and will be subject to all of its regulations and procedures. Local Soil Conservation District personnel will be responsible for delivery, sign up, administration, and certification. The Conservation Grants Program in the Office of Resource Conservation, MDA will assist with processing applications and payments. The program would continue to sign up acreage beyond the available funds as "stand by contracts" if they agree to follow program guidelines.

- Focused outreach and promotion from June 1, 2005
- Program sign up begins June 1, 2005
- $40 for cover crop planting by October 15, 2005
- NRCS bonus payment by October 15, 2005
- $30 for cover crop planting by November 1, 2005
- Cover crop kill down/suppression, certification and payment by June 2006

Project Completion Date: The Corsica River Cover Crop program will perform final certification and payment by July 2006.

Horse Pasture Management

The Corsica River WRAS and local agriculture groups identified horse pasture management as an issue that needed to be addressed as part of a comprehensive strategy in this watershed. Both the WRAS stakeholders and the agricultural subcommittees of the Tributary Strategy Teams determined that equine growth and associated pollution trend is of increasing concern. The conversion of farmland to farmette/residential land use has created poor pasture management, chiefly overgrazing, and problems with manure disposal. Owners of these farmettes often find handling and disposing of animal manure and bedding difficult. Stabling horses on small pieces of property creates conditions for the wastes to be concentrated. These animal wastes contain nitrogen and phosphorus that pose a threat to water quality. Soil from eroding pastures and

rainwater runoff from unmanaged animal wastes carry nutrients and sediment to the Chesapeake Bay and it's tributaries. Current programs provide technical assistance and education outreach.

This effort would support a cost-share program to address the issues and implement the necessary horse pasture management and manure management for five to six farmettes, demonstrating that small horse operators can conserve soil, protect water quality and manage pasture successfully. Tours and extensive public outreach will teach others in the watershed by example.

Other Agriculture BMP's

As part of this project, the SCD will continue the establishment of riparian forest buffers and agricultural BMPs utilizing local, state and federal incentive programs such as the Conservation Reserve Enhancement, Maryland Agricultural Cost-Share and Federal EQUP programs.

PROJECT HISTORY/BACKGROUND

The Corsica River, a tributary of the Chester River, is located in Queen Anne's County, Maryland. The watershed of the Corsica River has an area of approximately 25,000 acres or 40 square miles. The predominant land use, based on Maryland Office of Planning information, is agricultural (12,600 acres or 62%). Watersheds, and the implementation of agricultural best management practices, make a significant contribution to nutrient reduction in this watershed. Implementation of nutrient management plans, new animal waste management systems, conservation tillage, Soil Conservation and Water Quality Plans, (SCWQPs), and treatment of lands with high erosion potential all contribute to nutrient reduction. However, further actions are necessary in order to address conditions in watersheds as identified under the Watershed Restoration Plan and the TMDL goals.

Annual cover crops are highly effective in managing nutrients and sediments when planted in the early fall following the harvest of corn, soybeans, vegetables or tobacco. Cover crops reduce the leaching of excess crop nutrients from the root zone and provide valuable erosion protection.

Cover crops have long been recognized as one of the most effective practices to reduce nitrate-leaching losses. As noted in the November 1997 *Blue Ribbon Report, the Citizens Pfiesteria Action Commission* headed by The Honorable Harry Hughes:

> The Commission heard testimony from Dr. Russell B. Brinsfield. He pointed out that nitrate-leaching losses occur even when all crop yield goals are met and all best management practices and a nutrient management plan are implemented. Dr. Brinsfield estimates that the utilization of cereal grain cover crops can reduce nitrate-leaching losses by 60% following a corn or soybean crop. The Commission strongly encourages the regular use of cover crops as a best management practice.
>
> The Commission strongly recommends that the State implement a continuing cover crop program designed specifically to limit nitrate leaching and to prevent nutrients from entering the Bay and its tributaries. The Commission anticipates a meaningful level of support of a program designed to meet the specific goal of nutrient reduction. Participants in the program should not be permitted to assist crop growth by adding nutrients from organic or commercial fertilizer.

This project will build upon the State's current cover crop initiative that is inadequate to address

the needs based upon the Chesapeake Bay Program's funding analysis. Historically, Maryland provided 1.5 to 2.5 million annually for state-wide cover crops although this funding will slowly begin to increase with the states new Bay Restoration Fund. Evaluation of the need to meet the commitments in the current round of Tributary Strategies suggest that up to 19.5 million will be needed annually to meet the cover crop goals. Through this 319 initiative the agricultural agencies of Queen Anne's County will implement a cover crop program targeted for maximum water quality benefits in the Corsica River.

GOALS AND OBJECTIVES

A. Cover Crop Goal: The project will promote Cover Crops as a best management practice to help meet the water quality in the Corsica River.

Objectives

1. Promote a watershed based cover crop program within the region by way of intensive outreach primarily through the Soil Conservation District and with assistance from Cooperative Extension, local print media, and broadcast media.
2. Provide implementation assistance for farmers by supporting a custom seed applicator to sow the seed.
3. Install cover crops on 3,130 acres of cropland.

Measurable Environmental Results

1. The proposed cover crop program will target 3,130 acres under management.
2. Based upon Chesapeake Bay Program and Maryland's Tributary Strategies the efficiency of this practice is estimated at:
    a. 21,910 lbs. for nitrogen and
    b. 626 lbs. for phosphorus.

Interim Measures

1. Number of acres enrolled in Cover Crop Program.
2. Number of acres planted.
3. Number of operators that signed up for custom application assistance.
4. Number of acres in spring kill-down.

B. Provide Capacity Goal: The project will provide capacity to manage and provide education and outreach to the agriculture community to promote Cover Crops, and other best management practices, to help meet the water quality in the Corsica River.

Objectives

1. Hire a soil conservation/engineering technician to accelerate the application of agricultural BMP's in this watershed.
2. Provide outreach services to farmers, manage cover crop programs, and

demonstrate BMP installation with five to six equine cooperators.

3. Actively contact individual farmers to solicit participation in cover crop program.

Measurable Environmental Results

1. Number of BMP's installed.
2. Number of acres treated.
3. Number of pounds of nitrogen and phosphorus reduced.

Interim Measures

1. Number of contacts (CREP or other) made with individual farmers.
2. Number of contacts made with individual farmers.

C. Horse Pasture Management Goal: The project will provide education and outreach to the equestrian "farmettes" community to promote manure management support, and other best management practices, to help meet the water quality in the Corsica River.

Objectives

1. Demonstrate manure management practices on at least five equestrian "farmettes".
2. Provide outreach services to farmers. Actively contact individual farmers to solicit participation.

Measurable Environmental Results

1. Percent of targeted five farmettes under manure management.
2. Number of contacts made with individual farmers.
3. Pounds of nitrogen and phosphorus reduced.

Interim Measures

1. Percent of targeted five farmettes under manure management.
2. Number of contacts made with individual farmers.

Activities and Deliverables

Objective #1: Develop the capacity to administer a successful cover crop program by focusing the skills of a conservation engineer in the Corsica watershed. Promote a watershed based cover crop program within the region by way of publications and outreach primarily through the Soil Conservation Districts, local print and broadcast media. Provide custom cover crop application services to farmers.

Activities	Timeline	Responsible Entity	Deliverables
Hire soil conservation/engineer technician	Summer/Fall 2005	Queen Anne's County Soil Conservation District	Engineer Hired
Promote and install best management practices	Ongoing	Queen Anne's County Soil Conservation District	List of BMP's installed

Objective #2: Install cover crop on 4000 acres of cropland.

Activities	Timeline	Responsible Entity	Deliverables
Small grain application	Fall/Winter 2006	Queen Anne's Soil Conservation District	Number of acres with actual cover crops
Certify planting	Fall 2005	Queen Anne's Soil Conservation District	Statistics
Process claim from participants	Spring 2006	Queen Anne's Soil Conservation District	MACS status of claims
Perform spot checks	Spring 2006	Queen Anne's Soil Conservation District	Spot check statistics

Objective #3: Horse Pasture Management Goal

The project will provide education and outreach to the equestrian "farmette" community to promote manure management support, and other best management practices, to help meet the water quality in the Corsica River.

Activities	Timeline	Responsible Entity	Deliverables
Identify all applicable farmettes suitable for manure management program	Fall 2005	Queen Anne's County Soil Conservation District	List of potential farmettes developed
Plan outreach program and develop outreach materials	Winter 2005	Queen Anne's County Soil Conservation District	Outreach brochures, newspaper articles, newspaper advertisements, etc.
Contact all applicable farmettes	Spring 2006	Queen Anne's County Soil Conservation District	List of contacted farmettes
Hold sign up period for manure management program and develop appropriate follow up and technical assistance for farmettes	Spring 2006	Queen Anne's County Soil Conservation District	List of enrolled farmettes utilizing FFY 2006 funding Estimate of load reductions

Cooperating Agencies' Roles and Responsibilities

Agency	Organization	Role/Responsibility
Queen Anne's SCD	Lead agencies	Responsible for carrying out planned activities and evaluation
MD Dept. of Agriculture	Cooperator	Administration of funds dispersed through MACS program
Cooperative Extension	Cooperator	Assistance in demonstration project, outreach and publications
NRCS	Cooperator	Technical assistance and BMP standards development

BUDGET

Grant Year and Name: FFY 2005 Section 319(h) Incremental Grant
Agency/Organization: Maryland Department of Agriculture
Project Period: July 1, 2005 - July 31, 2006
Project Name: Corsica River Agriculture Demonstration Project: Horse Pasture Management, Cover Crops, Capacity Development

Category	**319(h)**	**Non-federal Match**	**Total**
Conservation Engineer	$42,591 (fringe) $14,907		$42,591 (fringe) $14,907
Outreach materials	$4,950		$4,950
Office supplies and materials	$1,000		$1000
Custom application of seed @ $35.00 per acre for 3,130 acres	$109,550		$109,550
Horse Pasture Management demonstration for five farmettes	$40,000		$40,000
Match: Maryland Agricultural Cost Share Program		$162,653	$162,653
Total	**$212,998**	**$141,999**	**$354,997**

Quarterly Spending Schedule

1st Quarter	**2nd Quarter**	**3rd Quarter**	**4th Quarter**	**Total**
$53,249.50	$53,249.50	$53,249.50	$53,249.50	**$212,998**